



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/500,793

01/31/2005

Robert James Eldridge

56-04

7006

23713

7590

11/28/2007

GREENLEE WINNER AND SULLIVAN P C

4875 PEARL EAST CIRCLE

SUITE 200

BOULDER, CO 80301

EXAMINER

PEZZUTO, HELEN LEE

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/500,793

Applicant(s)

ELDRIDGE ET AL.

Examiner

Helen L. Pezzuto

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 19-37 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1 and 19-37 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Claim 1 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/4/07.

2. This application contains claim 1 drawn to an invention nonelected with traverse in the reply filed on 6/4/07. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Response to Amendment***

Applicant's amendment to claims 1, 19, 21-37 filed in the response on 9/26/07 is acknowledged. Currently, claims 19-37 is under consideration in this application. In light of applicant's remarks filed on 9/26/07, US 6,590,094 is withdrawn as an applied reference because of the difference between prior art superparamagnetic material and applicant's magnetic material.

It is noted that the second occurrence of "The" expressed in claim 24 is redundant.

Art Unit: 1796

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballard et al. (US-489) for the reasons of record.

US 6,171,489 to Ballard et al. disclose and exemplify polymer beads and method for their preparation. Prior art polymer beads products are identical to those presently claimed and prepared by the identical dispersion polymerization process as used by applicant (see abstract; col. 7, lines 11-30; working Examples). Specifically, said dispersion contains a continuous aqueous phase, an organic dispersed phase containing a functional monomer and a crosslinking monomer, magnetic particles (i.e.  $\gamma\text{-Fe}_2\text{O}_3$ ), solid dispersing agent is used in the formation of polymer beads (col. 2, lines 50-61; col. 3, lines 25-64; col. 5, lines 1-29). Suitable crosslinking monomer, functional monomers include the presently recited amine group-

Art Unit: 1796

containing monomers and those which can be post-reacted to form the amine functionality (col. 4, lines 5-12) are disclosed. Furthermore, backbone monomer, porogen, and stabilizing agent were taught (col. 4, lines 16-45; col. 5, lines 22-29, 50-67). Prior art further discloses and exemplifies forming a weak acid cation ion exchange resin suitable for separating transition metal ions as contemplated by applicants (col. 6, lines 51-63; col. 10, Example 2). Accordingly, the instant invention is anticipated in view of prior art disclosure.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an

Art Unit: 1796

invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 19-21 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-4, and 6 of U.S. Patent No. 6,171,489. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant polymeric beads of complexing resin encompass the polymeric beads of ion exchange resin in US-489.

#### ***Response to Arguments***

7. Applicant's amendment and remarks filed 9/26/07 have been fully considered but they are not persuasive. The crux of applicant's arguments lies in US-489 does not disclose producing polymeric beads in a form suitable for use as a complexing resin as expressed in the preamble of the present claims because prior polymeric beads are primarily used as ion exchange resin. The examiner disagrees and takes the position that ion exchange resins fall within the scope of complexing resins. By definition, ion exchange resins contain functional groups that lend the resin capability of combining with or exchanging ions between the resin and a solution. Thus, "complexing" occurs as a functional of its mode of action. Applicants further urged there

Art Unit: 1796

is no teaching whatsoever in US-489 that would in any way lead a person skilled in the art to prepared polymeric beads incorporating amine groups capable of complexing a transition metal cation. The examiner disagrees. Depending on the amount of trimethylamine/hydrochloric acid is added, not all aminated sites are in the form of quaternary ammonium groups, and thus, would be capable of complexing a transition metal cation. Furthermore, prior art specifically teaches using functional monomers including dimethylaminoethyl methacrylate N,N-dimethylaminopropyl (meth)acrylamide, vinyl pyridine, diallylamine, N-vinyl formamide which all contain amine f groups capable of complexing a transition metal cation (col. 4, lines 5-11). Accordingly, the examiner's position is maintained.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated

Art Unit: 1796

from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

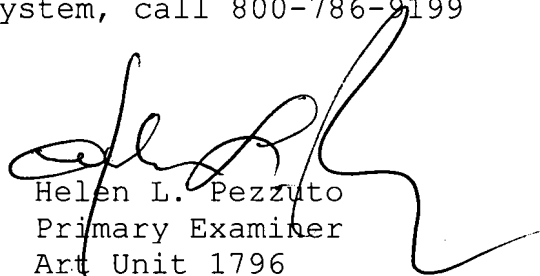
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1796

hlp